## What is claimed is:

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- 1. A process for preparing mono- or poly-C<sub>1</sub>-C<sub>20</sub>-alkyl- and/or -halogen-substituted arylcarbonyl chlorides (I), by, in a first stage, reacting a mono- or poly-C<sub>1</sub>-C<sub>20</sub>-alkyl- and/or -halogen-substituted aromatic (II) with CCl<sub>4</sub> in the presence of a Friedel-Crafts catalyst to give the corresponding mono- or poly-C<sub>1</sub>-C<sub>20</sub>-alkyl- and/or -halogen-substituted trichloromethylated aromatic (III), and, in a second stage, treating the trichloromethylated aromatic (III) with water or a protic acid in the presence of a catalyst to obtain the arylcarbonyl chloride (I).
  - 2. The process according to claim 1 for preparing mono- to pentasubstituted benzoyl chlorides of the general formula (Ia)

where R is in each case independently halogen or a  $C_1$ - $C_{20}$ -alkyl radical, by, in a first stage, reacting a mono- to pentasubstituted benzene of the general formula (IIa)

where R is as defined above,

as the substituted aromatic (II), with CCl<sub>4</sub> in the presence of a Friedel-Crafts catalyst to give the mono- to pentasubstituted benzotrichloride of the general formula (IIIa)

where R is as defined above,

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and, in a second stage, treating the benzotrichloride (IIIa) with water or a protic acid in the presence of a catalyst to obtain the benzoyl chloride (Ia).

3. The process according to claim 2, wherein trimethylbenzoyl chloride of the formula (Ib)

is prepared from mesitylene as the substituted aromatic (II).

- 10 4. The process according to any of claims 1 to 3, wherein the molar ratio of CCl<sub>4</sub> to substituted aromatic (II) is from 1:1 to 3.5:1.
  - 5. The process according to any of claims 1 to 4, wherein the Friedel-Crafts catalyst used is AlCl<sub>3</sub> and a complex of trichloromethylated aromatic (III) and AlCl<sub>3</sub> is formed in the first stage.
    - 6. The process according to claim 5, wherein from 1 to 1.5 equivalents of AlCl<sub>3</sub> per equivalent of the substituted aromatic (II) are used.
- 7. The process according to claim 5 or 6, wherein the complex of trichloromethylated aromatic (III) and AlCl<sub>3</sub> is hydrolyzed with water at from 20 to 100°C.
  - 8. The process according to claim 7, wherein the hydrolysis of the complex of trichloromethylated aromatic (III) and AlCl<sub>3</sub> is carried out continuously.
  - 9. The process according to any of claims 1 to 8, wherein the trichloromethylated aromatic (III) is treated in the second stage with chloroacetic acid as the protic acid.
- 10. The process according to any of claims 1 to 8, wherein the trichloromethylated aromatic (III) is treated with water in the second stage.
  - 11. The process according to any of claims 1 to 10, wherein the catalyst used in the second stage is FeCl<sub>3</sub>.

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- 12. The process according to any of claims 1 to 11, wherein the trichloromethylated aromatic (III) is isolated as an intermediate.
- 13. The process according to any of claims 1 to 11, wherein the trichloromethylated aromatic (III) is not isolated as an intermediate and is used in the second stage dissolved in the solvent of the first stage.